

**IN THE U.S. PATENT AND TRADEMARK OFFICE**

Application No.: 09/919,047

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Applicant: Ramesh Nagarajan et al.

Group Art Unit: 2613

Examiner: Nathan M. Curs

Title: CONNECTION SETUP STRATEGIES IN OPTICAL  
TRANSPORT NETWORKS

Attorney Docket: 129250-002056/US

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**APPELLANTS' REPLY BRIEF ON APPEAL**

**MAIL STOP APPEAL BRIEF - PATENTS**

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

October 31, 2007

**ARGUMENTS:**

**A. The Section 102 Rejections**

In the Answering Brief, according to the Examiner, the key question is “what does ‘initiating a cross connect’ mean in the claims?” (page 9 of the Answering Brief). Applicants respectfully disagree.

The Applicants respectfully submit that the claims and specification clearly set forth the meaning of this phrase.

Instead, the Applicants respectfully submit that the key question involves the correct interpretation of the Wei reference.

Turning first to the meaning of the phrase “initiating a cross connect”, the Applicants will accept the premise that the claimed initiation of a cross-connect is part of an overall connection set up process. The specification supports this presumption.

According to the specification, if resources are available (e.g., ports and wavelengths) an overall connection set up process begins.

As a part of this process a cross-connect is first initiated and, if all goes well, subsequently completed. Applicants note that the specification distinguishes between the initiation and completion of a cross connect in the overall connection set up process. For example, the specification explains that after a cross connect is initiated it may or may not be completed (page 4, line 31 to page 5, line 12). If one is not completed there can be no “cut-through” or completion of the connection process. Even if a cross-connect is completed, the completion and initiation steps are separate and distinct from one another.

Said another way, the specification describes the initiation of cross-connections as occurring at the beginning of an overall connection set up process not at the end when the cross-connect is either completed/cut-through or terminated because it cannot be completed.

Returning to the claims, each of the independent claims includes the feature of, among other things, sending a connection setup message to a next

node *at substantially the same time as a cross-connect is initiated*. In light of the specification, fairly interpreted the claims are directed at the sending of set up messages substantially at the beginning of the connection set up process when a cross connect is initiated.

The question then becomes: does Wei disclose the sending of set-up messages at the beginning of a connection set up process?

In interpreting Wei the Examiner appears to redefine Wei's single, overall connection set up process as two separate processes; a set-up process and an activation process.

Next, the Examiner appears to adopt the position that the first process and its corresponding time period,  $t_p$ , is not a part of a connection set up process. Instead, it is the Examiner's position that only the activation process and its corresponding time period  $t_c$  is a part of a connection set up process. For example, with respect to Figure 4 and time period  $t_c$ , the Examiner states that set-up messages are "propagating toward the next node at the same time that cross connect cut-through switching...initiates". In effect, the Examiner ignores the time period  $t_p$ . Applicants believe this is an error.

First, nowhere in Wei is it stated that the time period  $t_p$  is a part of a process that is somehow separate from a connection set up process.

Further, Figure 4 depicts the forwarding of set-up messages in the middle of a connection set up process, sometime after time period  $t_p$  has elapsed.

Yet further, Applicants note that nowhere within Wei is it stated that the set-up messages shown in Figure 4 are sent *at substantially the same time as a cross-connect is initiated* as in the claims of the present invention. Instead, the set up messages are propagated as the cross-connection is cut through during time period  $t_c$ .

Said another way, Wei discloses the propagation of set-up messages in the middle or towards the end of the connection set up process as the cross

connection is being substantially completed not at the beginning when the cross connection is initiated.

Lastly, as the Applicants have pointed out previously, Wei explicitly states that “the WDM switch [i.e., node] reserves the wavelength on the output port, proceeds to make the actual cross-connect by issuing a command to the fabric controller, and forwards the SETUP message to the next hop.” (see page 2029). Thus, in the most specific statement/explanation given by Wei it appears that a cross-connect is substantially completed before a set up message is forwarded onward; this is contrary to the claimed inventions.

Accordingly, Appellants respectfully request that the members of the Board reverse the decision of the Examiner, withdraw the rejections and allow claims 1, 3-7, 9-15 and 17.

**B. The Section 103 Rejections**

In the Answering Brief, the Examiner raises the question whether or not Qiao’s “control packet” and “data burst” are on the same wavelength or different wavelengths? (page 12). If the same, the Examiner concludes that Qiao must be discussing in-band signaling.

In more detail, though the Examiner acknowledges that Qiao does not use the terms “in-band signaling”, the Examiner takes the position that Qiao nonetheless is directed at such signaling because Qiao does not disclose that the control packet and data burst are “separate in wavelength”. Said another way, it is the Examiner’s position that because Qiao does not say it is directed at out-of-band signaling it must be directed at in-band signaling. Applicants disagree.

Fairly stated, it is not possible to determine with any degree of certainty what type of signaling, in-band, out-of band or otherwise, is contemplated by Qiao. However, if it is true that the teachings of Wei and Qiao can be combined without destroying their principles of operation it is more likely than not that Qiao is directed at out-of-band signaling because the “just in time”

methodology referred to in Wei is predominantly an out-of-band signaling scheme.

Further, Applicants note that to render the claims anticipated or obvious Qiao must disclose or suggest a claimed feature. The fact that Qiao is silent as to the feature of in-band signaling (or out-of-band signaling) means that it does not disclose such a feature. Further, it is respectfully suggested that such silence would not suggest to one skilled in the art that Qiao's techniques could be applied to in-band signaling especially in light of Wei's use of an out-of-band signaling scheme.

Accordingly, Appellants respectfully submit that the members of the Board reverse the decision of the Examiner, withdraw the rejections and allow claims 8 and 16.

**Conclusion:**

Appellants respectfully request that members of the Board reverse the decision of the Examiner and allow claims 1 and 3-17.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3777 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,  
Capitol Patent & Trademark Law Firm, PLLC

By: //John E. Curtin//  
John E. Curtin, Reg. No. 37,602  
P.O. Box 1995  
Vienna, VA 22183  
(703)266-3330